UNITED STATES PATENT AND TRADEMARK OFFICE

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10/667,912	09/22/2003	Ioannis Kouramanis	00100.03.0010	9917

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EXAMINER
NGUYEN, PHU K

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 March 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-38_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-38_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or

described as set forth in section 102 of this title, if the differences between the

subject matter sought to be patented and the prior art are such that the subject

matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over

MIZUNO (7,184,604).

As per claim 1, Mizuno teaches the claimed "apparatus for image processing, the

apparatus comprising: "a first memory device that receives a video input signal from a

camera, the video input signal containing an encoded video frame comprising a plurality

of portions of encoded video frame data, the first memory device having a storage

capacity less than all of the plurality of portions of encoded video frame data for the

encoded video frame" (Mizuno, the block readout of input data; column 19, lines 41-58;

the image is originally from a camera; column 2, line 1, column 15, lines 19-20), "the

first memory device receiving a first portion of the encoded video frame data" (Mizuno,

memory 204a; figure 37); "a graphics processor coupled to the first memory device such

that the graphics processor receives the first portion of the encoded video frame data

and generates a first graphics portion" (Mizuno, wavelet transform block 202); and "a

second memory device receiving the first graphics portion" (Mizuno, memory 204b). It

is noted that Mizuno does not teach "a handheld device" which utilizes the block

processing algorithm as claimed. However, given Mizuno's process for decoding and

displaying an encoded image block-by-block, it would have been obvious that "a

handheld device" utilizes such decoding method for displaying on a screen because the

block-by-block process reduces the required memory during the decoding which

provides an advantage for small device such as "handheld device" as claimed.

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant's arguments filed March 5, 2008 have been fully considered but they

are not deemed to be persuasive. Applicant argues that the encoded frame data are

from the transform block or graphics processor 202, not from a camera as claimed.

First, the issue of whether data is from a processor or from a camera does not have any

effect on the claimed apparatus; in Applicant's disclosure, such encoded data is used in

the process and not different than any other data sources. Furthermore, Mizuno does

mention that the encoded data originally comes from a digital camera (column 2, line 1,

column 15, lines 19-20).

Claim 2 adds into claim 1 "an external memory device coupled to the second

memory device such that the first graphics portion may be stored therein" which would

have been obvious in view of Mizuro's using an external memory to store of the output

image in figure 37 (official notice).

Claim 3 adds into claim 2 "the first memory device receives all of the portions of the encoded video frame data and provides each of the portions of the encoded video frame data to the graphics processor on a portion-by-portion basis" (Mizuro, column 23, lines 30-50).

Claim 4 adds into claim 3 "the graphics processor generates a plurality of graphics portions and provides the plurality of graphics portions to the second memory device on a portion-by-portion basis" (Mizuro, block-by-block basis; figure 37).

Claim 5 adds into claim 4 "the second memory device provides the plurality of graphics portions to the external memory on a portion-by-portion basis" which would have been obvious in view of Mizuro's using an external memory to store of the output image in figure 37 (official notice).

Claim 6 adds into claim 5 "at least one display operably coupled to the external memory such that an output display may be provided from the external memory, wherein the output display includes the plurality of graphics portions" (Mizuro, the example of displayed object in figure 45).

Claim 7 adds into claim 6 "the graphics processor further includes a quantization

table for generating the graphics portions having an adjusted data set and wherein the

output display is a thumbnail of the plurality of graphics portions" which would have

been obvious compression or down-quantization the image into a thumbnail for

representing the image (official notice).

Claim 8 adds into claim 1 "a real time direct memory access device coupled to

the first memory device and the second memory device and the graphics processor

such that the real time direct memory access device provides for direct access to the

first memory device and the second memory device" (Mizuro, the memories 204a-204b;

figure 37).

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant's arguments filed March 5, 2008 have been fully considered but

they are not deemed to be persuasive. Applicant argues that Mizuno does not teach

the claimed memory is a "real time" direct memory access. However, this rejection is

under the obviousness doctrine of 35 USC 103(a), and since there is a tradeoff between

the price of a processor and the speed of processor, the issue of whether Mizuno's

transform block or graphic processor 202, which has a direct memory access to the

memories 204a-204b, is real time processor is just a design choice in the

decode/encode process. A software program run by either a PC computer or a

supercomputer is not different in evaluation of its patentability. Therefore, the real time

processor would have been obvious for the purpose of increase the processing speed.

Claim 9 adds into claim 8 "the first memory device is a first portion of an embedded memory device and the second memory device is a second portion of the embedded memory device" which would have been obvious because Mizuro's memories can be a portion within an embedded memory device (official notice).

Claims 10-13, and 15-17 claim a method based on the system of claims 1-6, 8-9; therefore, they are rejected under the same reason.

Claim 14 adds into claim 11 several encoding process which Mizuro teaches in the wavelet encoding (figure 16).

Claim 18 adds into claim 10 "a ring buffer approach" which would have been obvious in view of Mizuro's memories 204a-204b (official notice).

Claims 19-30 are similar to claims 1-6, 8-13, 15-18 but adds JPEG format (Mizuro, column 1, lines 10-13); and the input device such as camera which would have been obvious (official notice); image decoder (Mizuro, figure 37); quantization (obvious for a camera- official notice); or MPEG format (official notice).

Claims 31-38 claim a method based on the system of claims 19-30; therefore, they are rejected under the same reason.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phu K. Nguyen/
Primary Examiner, Art Unit 2628